

WHAT IS CLAIMED IS:

1. A projectile for use with a wireless neuromuscular disrupter gun for delivery of an electrical charge to a target, comprising:

5 an outer housing suitable for containing liquid;
a capacitor contained within the housing, wherein the conductive liquid provides the capacitor dielectric, which separates the capacitor plates; and

contacts for delivering an electrical charge to the
10 capacitor while the projectile is inside the gun prior to firing of the gun, such that no wires are required to charge the capacitor after the projectile leaves the gun.

2. The projectile of Claim 1, wherein the capacitor
15 plates form at least one concentric ring within the outer housing.

3. The projectile of Claim 1, wherein the liquid is
dionized water.

20 4. The projectile of Claim 1, further comprising at least one contact wire attached to the outer surface of the projectile and operable to unfurl during flight of the projectile.

25 5. The projectile of Claim 1, wherein the contacts are conductive ends of the housing.

6. The projectile of Claim 1, wherein the capacitor
30 plates are formed from material folded within the housing.

7. The projectile of Claim 1, wherein the capacitor plates extend from the inner surface of the housing.

8. The projectile of Claim 1, wherein the capacitor
5 plates separate the interior of the housing into at least two portions.

9. The projectile of Claim 1, wherein the housing
is made from a material that deforms upon impact.

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10. The projectile of Claim 1, wherein the liquid
is a water-based gel.

11. The projectile of Claim 1, wherein the liquid
15 has a dielectric constant of at least 80.

12. The projectile of Claim 1, wherein the
capacitor has a capacitance value of at least 400
picofarads.

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13. The projectile of Claim 1, wherein the
capacitor plates are insulated from the liquid with an
insulating material.

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14. The projectile of Claim 13 wherein the
insulating material has a dielectric constant lower than
that of the liquid.

15. The projectile of Claim 1, wherein at least one
30 capacitor plate is made from a conductive liquid.

16. The projectile of Claim 1, wherein the housing
breaks apart upon impact.

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PATENT APPLICATION

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17. The projectile of Claim 1, wherein the
projectile is bullet shaped.

18. A method of using a neuromuscular disrupter gun for delivery of an electrical charge to a target, comprising the steps of:

forming a capacitor within a projectile housing,
5 wherein liquid within the housing provides the capacitor dielectric, which separates the capacitor plates;
electrically charging the capacitor while the projectile is in the gun; and
firing the charged projectile from the gun.

10 19. The method of Claim 18, further comprising the step of attaching at least one contact wire to the outer surface of the housing, such that the contact wire travels with the projectile and is operable to unfurl
15 during flight of the projectile.

20. The method of Claim 18, wherein the firing step is performed using gunpowder.

20 21. The method of Claim 18, wherein the firing step is performed using compressed gas.

22. The method of Claim 18, wherein the capacitor plates form at least one concentric ring within the outer
25 housing.

23. The method of Claim 18, wherein the liquid is dionized water.

30 24. The method of Claim 18, further comprising at least one contact wire attached to the outer surface of the projectile and operable to unfurl during flight of the projectile.

25. The method of Claim 18, wherein the capacitor plates are formed from material folded within the housing.

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26. The method of Claim 18, wherein the capacitor plates extend from the inner surface of the housing.

27. The method of Claim 18, wherein the housing is
10 made from a material that deforms upon impact.

28. The method of Claim 18, wherein the liquid is a water-based gel.

15 29. The method of Claim 18, wherein the liquid has a dielectric constant of at least 80.

30. The method of Claim 18, wherein the capacitor has a capacitance value of at least 400 picofarads.

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31. The method of Claim 18, wherein at least one capacitor plate is made from a conductive liquid.

32. The method of Claim 18, wherein the housing
25 breaks apart upon impact.